Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE INSTRUCTION 10-1703

Operations and Services
Dissemination Services NWSPD 10-17

VALID TIME EVENT CODE (VTEC)

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OPR: OS5 (H. White) **Certified by:** OS5 (R. McLeod)
Type of Issuance: Initial.

Gregory A. Mandt
Director, Office of Climate,
Water, and Weather Services

Date

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1. Introduction. The Valid Time Event Code (VTEC) always is used in conjunction with, and provides supplementary information to, the Universal Geographic Code (UGC), to further aid in the automated delivery of National Weather Service (NWS) text products to users. The VTEC is included in many event-driven, non-routine products (see Section 3.4, Marine Weather Products, for an exception). The VTEC provides information on the event, while the UGC (see NWS Instruction [NWSI] 10-1702 for description of the UGC) describes the affected geographic area and the product purge time. See important definitions in sections 1.3, 1.4, and 1.5.

There are two forms of VTEC: (1) the "primary" or **P**-VTEC, and (2) in certain hydrologic products, a supplementary hydrologic or **H**-VTEC that always is used in conjunction with, and occurs on the line immediately after, the P-VTEC line(s). The P-VTEC rules and format are described in sections 1, 2 and 3; the H-VTEC rules and format, providing flood information for certain products, are described in section 4.

NWS text product generation software applications automatically include the P-VTEC and H-VTEC line(s) in appropriate products.

Examples of the VTEC with detailed interpretation illustrating information in the various sections are found throughout this document. More comprehensive examples of products with the VTEC are found in Appendix C.

1.1 Mission Connection. The NWS mission to protect life and property, and to enhance the national economy, is carried out by timely delivery through a variety of dissemination systems of warnings, watches, forecasts, and other relevant weather, flood, climate, and critical non-weather-related information under the "all hazards" concept (see definition in NWS Policy Directive 10-17). Correct use of product formats and codes is essential to ensure this delivery and allow users to select, manipulate, and redistribute the information regardless of the dissemination method of receipt.

1.2 Implementation. The operational implementation of P-VTEC and H-VTEC in products will occur on the effective date of this NWSI or on a later date provided in an NWS Service Change Notice at least 60 days prior to the NWSI effective date. Implementation of specific products will depend on the availability of NWS applications software. The VTEC Implementation Plan, a document periodically updated with new information during the implementation phase, lists NWS products that will be disseminated using the VTEC, and many

more product examples and associated VTEC interpretations. The VTEC Implementation Plan, as updated, is available on the Internet at: http://www.nws.noaa.gov/om/vtec/.

Most event-driven products that include the UGC will include the P-VTEC and, where appropriate, also the H-VTEC. Additional codes may be added to the VTEC element tables in Appendices A and B, as needed, for future text products.

1.3 Basic Definitions of the VTEC.

a. The **P**-VTEC identifies characteristics of the event(s), including (1) its status, type, and tracking number; and (2) the event(s) beginning and ending time(s) (see section 1.5).

b. The **H**-VTEC line is "triggered by" and is always present when the Phenomena Code in the P-VTEC is FL for Flood or FF for Flash Flood. The H-VTEC identifies characteristics of the flood event, including the flood severity (for main stem rivers); immediate causes; timing of flood beginning, crest, and end; and whether the flood will be at or near a record. The H-VTEC occurs on a line immediately after the associated triggering P-VTEC line(s).

1.4 Event versus Segment versus Product. It is important to understand the distinction between an "event," "segment" and "product" to understand and use the P- and H-VTECs properly.

a. **Event**: A specific combination of phenomena (e.g., type of weather, flood) and significance level of alert (e.g., Watch, Warning, Advisory - W/W/A). See Appendix A for a list of phenomena and significance levels. Common examples of events include Tornado Warning, Winter Storm Watch, Wind Advisory, Flood Warning, and Special Marine Warning.

b. **Segment**: Each segment (of a segmented product) consists of routine or event-driven weather, hydrologic, marine or other information that uniquely applies to a geographic area (as encoded in the UGC line[s]). The area typically includes one or more counties or NWS land or marine zones. The segment format includes the UGC grouping; the VTEC, as appropriate; any UGC-associated plain language geographic names; and a repeat of the Date/Time line (see NWSI 10-1701, NWS Text Formats and Codes for complete format rules).

* An exception: Certain hydrologic products that cover large areas may have segments describing differing events for the same geographic area.

b. **Product**: The entire segmented or non-segmented message issued to the public under a single Mass News Disseminator (MND) header, that may include information on one or more events.

Note that the product for a short-duration event (typically non-segmented) has the same title as the name of the event itself, e.g., Tornado Warning. Many long-duration (W/W/A) products, however, include several different events (not necessarily all contained within any one product issuance) and therefore have a different title than the event names. For example, Winter Storm Warnings, Watches and Advisories (WSW) is the product title and can include a variety of winter events, such as Heavy Snow Warning, Freezing Rain Advisory.

For example, if "heat" is the phenomena and "advisory" is the significance level, then a "Heat Advisory" is the event and the public receives the information by the Non-Precipitation Weather (NPW) product. Similarly, a blizzard warning and a lake effect snow advisory are each events. The public receives the information for either event (or both, if they are occurring within the same time span) in a WSW product. If each event were for a different geographic area, then the WSW would be issued with two segments.

1.5 Product Purge Time versus Event Ending Time.

a. **Product Purge Time**: Found at the end of the last UGC group for an event, it is the time the product or product segment should no longer be used. In long-duration W/W/A products, when the event(s) is ongoing, the product purge time is the time when customers can expect to receive an updated product.

b. **Event Ending Time**: This is the last group of the P-VTEC line, and is the time when the event is no longer valid. This time is also found in plain language in the narrative part of the product.

2. Primary (P)-VTEC Format. The P-VTEC line(s) (and any H-VTEC line[s] - see Section 4) occurs immediately after the UGC line(s), and occurs in different places within the product, depending on whether the product is segmented or not.

In segmented products, the UGC and any VTEC lines occur at the beginning of each segment, immediately followed by any UGC-associated plain language listing of zones or counties affected (or other words identifying the affected area). All segments of a product occur after the MND.

In non-segmented products, the UGC and VTEC lines (but without any plain language geographic listing) occur immediately after the NWS Communications Identifier and before the MND.

See NWSIs 10-1701 and 10-1702 for important overall product format information.

2.1 Generic Structure of P-VTEC Elements.

/k.aaa.cccc.pp.s.####.yymmddThhnnZ$_B$-yymmddThhnnZ$_E$/

The "aaa.cccc.pp.s.####" group depicts the characteristics of the event, and the yymmddThhnnZ_b-yymmddThhnnZ_E group depicts the event beginning and ending date/time in Universal Coordinated Time (UTC), respectively. Following are the individual VTEC code groupings/elements

Product/VTEC String Type Identifier

k - Fixed identifier of product/VTEC string type (O, T, E, or X) (See definitions in section 2.2.1.)

Event Group

aaa - Action
cccc - Office ID
pp - Phenomena
s - Significance
- Event Tracking Number (ETN)

Date/Time Group

yy - Year
mm - Month
dd - Day
T - Fixed Time Indicator
hh - Hour in UTC
nn - Minute in UTC
Z_B - Fixed UTC Beginning Date/Time Indicator
Z_E - Fixed UTC Ending Date/Time Indicator

Notes:
(1) The "T" in the Date/Time Groups is a fixed Time Indicator, with the following "hh" and "nn" being the hours and minutes in UTC, respectively.
(2) The Z_B and Z_E are the fixed UTC indicator for the beginning and ending date/time groups, respectively. The subscripts B and E are only shown in the generic format; they are not included in any actual VTEC strings in products and examples.
(3) The forward slash ('/'), period ('.'), and dash ('-') in the format are delimiters that separate fields for ease in decoding. The date/time format follows the FIPS/ANSI/ISO standard (FIPS 4-2:1998/ANSI x3.30-1997/ISO 8601:2000).

2.2 P-VTEC Element Definitions/Explanations.

2.2.1 **k** (Fixed Identifier): Identifies the following product and VTEC code string types.

k Code Definitions:

O (Operational Products) - Products defined in NWS policy and produced on a reliable and continuous basis, whose content has been validated, and the contents reflect real-time environmental conditions or events.

T (Test Products) - Products generated for the purpose of evaluation, the conduct of a communications test, or the conduct of a weather drill or test. Test products may be

modeled after operational products or experimental products, but content does not reflect real-time environmental conditions or events. The word TEST will also be included in the product Type Line of the MND and the product text as described in NWSI 10-1701.

E (Experimental Products) - Products available for evaluation for a specified, limited time for the explicit purpose of obtaining customer feedback. Content has not been validated but generally reflects real-time environmental conditions or events.

X (Experimental VTEC in an Operational Product) - A non-operational VTEC is inserted into an otherwise operational product and available for evaluation for a specified, limited time for the explicit purpose of obtaining customer feedback. The experimental VTEC content has not been validated but reflects real time environmental events.

Note: Product segments that include "T" or "E" product type VTECs should never be mixed with segments that include "O" or "X" VTECs in multi-segmented products.

2.2.2 **aaa** (Action): Identifies the action in the product issuance.

Action Code Definitions:

NEW (NEW) - Used for an initial issuance of an event. Also used for an event that has replaced another event for the same area, as when an event is upgraded (see the "UPG" action term below).

CON (CONTINUED) - Used when providing updates to an existing event, where no changes were made to the area, valid time period or Significance category.

EXT (EXTENDED IN TIME) - The valid time period of an existing event has been made longer or shorter by changing either or both the Event Beginning or Ending Date/Time Group. No changes were made to the area or the Significance category.

EXA (EXTENDED IN AREA) - The valid area of the W/W/A has been expanded from its initial issuance. No changes were made to the valid time period or Significance category.

EXB (EXTENDED IN BOTH TIME AND AREA) - The valid time period and valid area of the W/W/A have been extended. No changes were made to the Significance category.

UPG (UPGRADED) - Used when an event is upgraded for the same area to a higher significance level, e.g., from a watch to an advisory or warning, and from an advisory to a warning. Two P-VTEC lines are used: The UPG is used in the first P-VTEC line to show the event being upgraded from (e.g., an advisory) and the NEW is used in the second P-VTEC line to show the event upgraded to (e.g., a warning). The NEW event may be for a different valid time, e.g., the warning extends the time of the original advisory, but another VTEC line using the EXT is not required. (See examples in section 3.1.)

CAN (CANCELED) - Used when an event has been canceled before its Event Ending Date/Time Group. CAN may be used when an event is still active to advise that the event will be canceled at a particular time and may also be used after the event has been canceled to provide additional information about the event. See the respective Product Specifications Documents for additional guidance on permitted times of use in specific products. CAN is also used to identify when an event has been downgraded (see examples in section 3.1) to a lower significance level, e.g., from a warning to an advisory. In this case, two P-VTEC lines are used: The CAN is used in the first P-VTEC line to show the event being downgraded from (e.g., a warning) and NEW is used in the second P-VTEC line to show the event downgraded to (e.g., an advisory). The NEW event (in this case, the advisory) may have a different valid time, but another VTEC line using the EXT is not required.

EXP (EXPIRED) - Used in a product providing "concluding" information about an event when the Event Ending Date/Time Group will soon be, or has been, reached. EXP may be used when an event is still active and/or after the event has expired. It is not required that a "concluding" product with the EXP in the VTEC be issued. See the respective Product Specifications Documents for additional guidance on permitted times of use in specific products.

ROU (ROUTINE) - This action code is only used for the Marine Forecast (four) product. Since it is used to convey both W/W/A events and routine information, the ROU is used only when there are no W/W/As in effect (see Section 3.4 on marine products).

COR (CORRECTION) - Used when correcting any errors to a previous message, including a change to the coding or area affected, text wording, etc. A single COR VTEC line is used per segment (or more than one COR VTEC line is used if more than one event is being corrected) for all errors in a product. MND header and product text indicate correction.

2.2.3 **cccc** (Office ID). The standard four-letter identifier indicating the NWS office with the primary responsibility for the affected area. The office ID is the same as that in the plain language MND header. Any NWS office providing backup service will use the primary office's cccc.

2.2.4 **pp** (Phenomena). Identifies the type of weather, flood, marine, fire weather, etc., occurrence (e.g., freezing rain, river flood, gale, red flag), or non-weather occurrence (e.g., radiological hazard, volcano). See Appendix A for the complete list of Phenomena codes.

2.2.5 **s** (Significance). Identifies the level of alert (e.g., watch, warning, advisory, etc.) of the weather or non-weather occurrence. See Appendix A for the complete list of Significance codes.

2.2.6 #### (Event Tracking Number - ETN). The ETN automatically is assigned sequentially by NWS applications software for each type of event issued by each office, starting with 0001 for the first new event of its type for the calendar year starting at 0000UTC on January 1. This

includes the ETN for events within operational, experimental and test products, except for certain nationally originated events (described in 2nd paragraph below) .

A new ETN is assigned when first issuing the event, and the same ETN is carried when the event is continued, canceled or extended (in area, time or both). Note that any experimental or test product(s) issued within the operational product flow for a particular event will use the same ETN as the operational product(s). The ETN is incremented each time a new weather system causes the same event type to be issued. When an experimental or test product is issued (when no actual events are ongoing), the ETN for that product is incremented from the last experimental or test product. For example, a previous test product's ETN was 0007. The next test product's ETN, absent any ongoing events, would be 0008. If backup service is required from another office(s), the primary office's ETN is used throughout the event.

Locally derived watch products issued by WFOs that are based on the Storm Prediction Center's (SPC) Tornado/Severe Thunderstorm Watches use the same sequential ETNs as the original SPC watches. SPC will use the ETNs 9990-9999 for test watches.

For products (e.g., WSW, NPW) that may include more than one event, each specific event within the product will have its own ETN. For example, an office issues a WSW product early in the calendar year with the following segments (each describing a specific event for a specific geographic area) and corresponding ETNs:

Event	ETN
(1) Blizzard Warning	0002 (2nd Blizzard Warning of the year)
(2) Winter Storm Warning	0004 (4th Winter Storm Warning of the year)

Two weeks later, a new weather system causes the same office to issue a WSW with the same order of segments, with the following corresponding ETN:

Event	ETN
(1) Blizzard Warning	0003 (3rd Blizzard Warning of the year)
(2) Winter Storm Warning	0005 (5th Winter Storm Warning of the year)

A broad weather system may cause several offices to issue the same event for their area of responsibility, say a Winter Storm Watch within a WSW product. That watch may have different ETNs from each issuing office, depending on how many prior Winter Storm Watches each office issued.

2.2.7 **yymmddThhnnZ$_B$ and yymmddThhnnZ$_E$** (Event Beginning and Ending Date/Time Groups). These groups, respectively, identify the valid time span of the event in UTC.

a. **Event Beginning Date/Time Group** identifies when the event (e.g., Lake Effect Snow Advisory) will become effective. This group is represented with numeric values for new events or for actions taken before the effective valid time of the

event begins. For any actions taken after the event has begun, these values will be zeros (see special coding paragraph below). This grouping will not necessarily correspond with the product issuance date/time in the MND header (in local time) and in the World Meteorological Organization abbreviated header (in UTC). But in any case, the Event Beginning Date/Time may be later than the product issuance time, but will never be earlier.

Special coding of the Event Beginning Date/Time Group is used when an action (continued, extended in area/time, upgraded, canceled or expired) has been taken after an event has begun. In these cases, the yymmddThhnnZ_B is coded with ten zeros (000000T0000Z). This will prevent an accidental invalidation of an ongoing event. Similarly, updates to an ongoing event (e.g., further information on a watch or warning that was issued previously) will cause the yymmddThhnnZ_B to be coded "000000T0000Z" to indicate the event is ongoing (i.e., not new) and not a new issuance.

b. **Event Ending Date/Time Group** identifies when the event will no longer be in effect. This will not necessarily correspond to the product purge date/time found at the end of the last UGC group (in UTC) (see definition in section 1.5).

Examples of Event Timing Codes: Following are examples of P-VTEC lines for various events to illustrate date/time group coding when the product or product segment is issued before or within the event valid time spans.

ACTION	BEFORE VALID TIME	WITHIN VALID TIME
NEW	/O.NEW.KRLX.BZ.A.0002.041222T1700Z-041223T0400Z/	N/A
CONTINUED	/O.CON.KCLE.LE.A.0007.041018T1500Z-041019T0200Z/	/O.CON.KCLE.LE.A.0007.000000T0000Z-041019T0200Z/
EXTENDED	/O.EXT.KLWX.WS.A.0004.040116T1800Z-040116T2200Z/	/O.EXT.KLWX.WS.A.0004.000000T0000Z-040117T0100Z/
CANCELED	/O.CAN.KMKX.SN.W.0012.040207T2200Z-040208T0930Z/	/O.CAN.KMKX.SN.W.0012.000000T0000Z-040208T0930Z/
EXPIRED	N/A	/O.EXP.KMSO.WC.Y.0009.000000T0000Z-041118T0800Z/
TEST	/T.NEW.KLOT.HT.Y.0003.041208T1430Z-041208T1500Z/	N/A

Notes:
(1) In the table above, when the product is issued before the valid beginning time of the included event, the actual event beginning time is always given. When the product is issued to provide information on an action after the event has begun, the event beginning time is always set to zeros.
(2) When a new event is effective upon product issuance, the Event Beginning Date/Time group is coded with the issuance date/time of the product as shown in the MND header.

For example:

/O.NEW.KEAX.ZR.Y.0004.041214T1252Z-041214T1430Z/

Interpretation: Weather Forecast Office (WFO) Kansas City/Pleasant Hill, MO (KEAX), issued a "NEW" WSW product on December 14, 2004, for its 4th (0004) Freezing Rain Advisory (ZR.Y) of the calendar year (2004), valid from1252 UTC (Z_B group) to 1430 UTC (Z_E group).

3. Special Rules, Applications and Interpretations. This section explains unique applications of VTEC in specific products.

3.1 Event Significance Level Change or Replacement in Products. Two P-VTEC lines are required in the following products: WSW and NPW, Fire Weather, and certain marine and hydrologic products when an event for the same area is (1) upgraded/downgraded to a different significance level, e.g., a watch is being upgraded to a warning or advisory, an advisory is being upgraded to a warning, a warning is being downgraded to an advisory or (2) replaced by a different event, e.g., an event warning/advisory is being replaced by another event warning/advisory. Two P-VTEC lines are also required when correcting a combined warning product, such as a Severe Thunderstorm Warning and a Flash Flood Warning. In this case, an H-VTEC line is also required. See Appendix C, Section 2e for a complete example.

a. First VTEC line - action code UPG or CAN is used to show the old W/W/A being upgraded or canceled. In the Marine Program, where the original routine forecast product to be upgraded or replaced did not include any W/W/A events, the first VTEC line would use the action code NOU. The Special Marine Warning, however, uses the UPG or CAN.

b. Second VTEC line - action code NEW is used to start new W/W/A for all VTEC products.

For the following sequence of examples, WFO Oklahoma City, OK, is the issuing office for the same OK and TX zones.

(1) Upgrade Watch to Warning Example:

OKZ006>008-011>024-033>036-TXZ083-281100-	(UGC line)
/O.UPG.KOUN.WS.A.0004.040128T0500Z-040129T0000Z/	(P_VTEC line 1)
/O.NEW.KOUN.IS.W.0003.040128T0500Z-040129T0000Z/	(P-VTEC line 2)

Interpretation: The WFO issued an operational WSW product on January 28, 2004, to upgrade a Winter Storm Watch event (the 4th of the year) before its valid beginning time of 0500 UTC (P-VTEC line 1) to an Ice Storm Warning for freezing rain (the 3rd of the year) with the same valid beginning time and ending time of 0000 UTC on January 29th (P-VTEC line 2). Note that since the Watch valid time had not yet occurred when the action to upgrade it to a Warning occurred, the actual beginning valid time of the Watch is used. The UGC line shows the various OK and TX zones.

(2) Downgrade from Warning to Advisory Example:

OKZ006>008-011>024-033>036-TXZ083-281700-	(UGC line)
/O.CAN.KOUN.IS.W.0003.000000T0000Z-040129T0000Z/	(P-VTEC line 1)
/O.NEW.KOUN.ZR.Y.0003.040128T1100Z-040129T0000Z/	(P-VTEC line 2)

Interpretation: The WFO issued an operational WSW product on January 28, 2004, to downgrade (cancel) the Ice Storm Warning (the 3rd of the year - whose valid beginning time has already occurred) (P-VTEC line 1) to a Freezing Rain Advisory (also the 3rd of the year) valid from 1100 UTC on the 28th to 0000 UTC on the 29th (P-VTEC line 2).

(3) Replace Ice Storm Warning with Winter Storm Warning Example:

OKZ006>008-011>024-033>036-TXZ083-281200- (UGC line)
/O.CAN.KOUN.IS.W.0003.000000T0000Z-040129T0000Z/ (P-VTEC line 1)
/O.NEW.KOUN.WS.W.0005.040128T0530Z-040129T0000Z/ (P-VTEC line 2)

Interpretation: The WFO issued an operational WSW product on January 28, 2004, to replace (cancel) an Ice Storm Warning (the 3rd of the year - whose valid beginning time has already occurred) (P-VTEC line 1) to a Winter Storm Warning (the 5th of the year), whose valid beginning time was 0530 UTC on the 28th and ending time was 0000 UTC on the 29th (P-VTEC line 2).

3.2 Severe Thunderstorm/Tornado Watch Products. Section 3.2.1 provides an example of the overarching Watch Outline Update (WOU) product issued by the SPC, that contains the VTEC (the other SPC products do not contain the VTEC). Section 3.2.2 provides an example of an affected WFO's follow-up Watch County Notification (WCN) product. See NWSI 10-512, National Severe Weather Products Specification and NWSI 10-511, WFO Severe Weather Products Specifications for comprehensive details on the WOU and WCN, respectively.

3.2.1 Watch Outline Update Product (WOU). Following is an example of a WOU issued by SPC. Note the ETN is 702. This ETN would be used by all affected WFOs in their WCN products.

WOUS64 KWNS 291950
WOU1

BULLETIN - IMMEDIATE BROADCAST REQUESTED
SEVERE THUNDERSTORM WATCH OUTLINE UPDATE FOR WS 702
NWS STORM PREDICTION CENTER NORMAN OK
350 PM EDT SUN AUG 29 2004

SEVERE THUNDERSTORM WATCH 702 IS IN EFFECT UNTIL 900 PM EDT FOR THE FOLLOWING LOCATIONS

DEC001-003-005-300100- (UGC line)
/O.NEW.KWNS.SV.A.0702.040829T1950Z-040830T0100Z/ (P-VTEC line)

DE
. DELAWARE COUNTIES INCLUDED ARE

KENT NEW CASTLE SUSSEX

$$

MDC003-005-510-009-011-013-015-017-019-021-025-027-029- (UGC lines)
031-033-035-037-041-300100-
/O.NEW.KWNS.SV.A.0702.040829T1950Z-040830T0100Z/ (P-VTEC line)

MD
. MARYLAND COUNTIES INCLUDED ARE

ANNE ARUNDEL BALTIMORE CALVERT
CAROLINE CARROLL CECIL
(Rest of counties continues)

MARYLAND INDEPENDENT CITIES INCLUDED ARE

BALTIMORE CITY
$$

ANZ430-431-453>455-530>537-630>632-650-652-654-300100- (UGC line)
/O.NEW.KWNS.SV.A.0702.040829T1950Z-040830T0100Z/ (P-VTEC line)

CW
. ADJACENT COASTAL WATERS INCLUDED ARE

COASTAL WATERS FROM LITTLE EGG INLET TO GREAT EGG INLET NJ OUT 20 NM

COASTAL WATERS FROM GREAT EGG INLET TO CAPE MAY NJ OUT 20 NM
(rest of coastal waters areas)
$$

Interpretation: The SPC issued a WOU product, # 702 (ETN) on August 29, 2004 for a Severe Thunderstorm Watch event for counties in Delaware and Maryland, and adjacent coastal waters (from the UGC lines), valid from 1950 UTC on the 29th to 0100 UTC on the 30th.

3.2.2 Watch County Notification Product (WCN). The WCN product issued by affected WFOs will handle all aspects for their respective forecast/warning area of responsibility (issuance, clearing counties, continuing counties, canceling, expiration) of Severe Thunderstorm Watch or Tornado Watch issuances by the SPC.

In WCN products, the SPC WOU watch number will be used as the ETN. This allows WCN products from adjacent WFOs to have the same ETN for the same watch.

Following are two examples of a WCN product. The first is an initial issuance of a Severe Thunderstorm Watch product/event by WFO Houston/Galveston, Texas. The second, issued by WFO Shreveport, Louisiana, cleared a portion of a Tornado Watch from its area (requiring two

segments). For information on other variations of the WCN product, such as "Clearing remaining counties from a watch," "Second watch issued while first watch remains in effect," "Extending a watch's expiration time for selected counties," see NWSI 10-511.

Example 1 - WCN

WWUS64 KHGX 111709
WCNHGX

WATCH COUNTY NOTIFICATION FOR SEVERE THUNDERSTORM WATCH 856
NATIONAL WEATHER SERVICE HOUSTON/GALVESTON TX
1206 PM CDT WED AUG 11 2004

TXC015-039-041-051-071-089-167-185-201-239-291-321- (UGC lines)
339-407-471-473-477-481-GMZ235-335-112300-
/O.NEW.KHGX.SV.A.0856.040811T1705Z-040811T2300Z/ (P-VTEC line)

THE NATIONAL WEATHER SERVICE HAS ISSUED A SEVERE THUNDERSTORM WATCH 856 UNTIL 600 PM CDT WEDNESDAY EVENING FOR THE FOLLOWING AREAS

IN SOUTHEAST TEXAS THIS WATCH INCLUDES 18 COUNTIES

AUSTIN BRAZORIA BRAZOS
BURLESON CHAMBERS COLORADO
(rest of counties)

THIS WATCH INCLUDES THE FOLLOWING ADJACENT COASTAL WATERS

COASTAL WATERS FROM MATAGORDA SHIP CHANNEL TO PORT ARANSAS PASS OUT TO 20 NM

GALVESTON BAY

COASTAL WATERS FROM HIGH ISLAND TO FREEPORT TX OUT TO 20 NM

THIS INCLUDES THE CITIES OF WHARTON...TEXAS CITY...SEALY...RICHMOND...
(rest of cities)
$$

Interpretation: WFO Houston/Galveston, TX, issued a new WCN product on August 11, 2004, for a Severe Thunderstorm Watch event (using SPC's ETN 856), valid from 1705 UTC to 2300 UTC on the 11th (from the P-VTEC line), for 18 Texas counties, certain coastal waters and Galveston bay (from the UGC lines).

Example 2 - WCN

WATCH COUNTY NOTIFICATION FOR TORNADO WATCH 1002
NATIONAL WEATHER SERVICE SHREVEPORT LA
230 PM CDT WED MAY 26 2004

ARC061-081-133-262030- (UGC line) (segment 1)
/O.CAN.KSHV.TO.A.1002.000000T0000Z-040527T0100Z/ (P-VTEC line)

THE NATIONAL WEATHER SERVICE IN SHREVEPORT HAS
CLEARED A PORTION OF TORNADO WATCH 1002.
COUNTIES CLEARED FROM THE TORNADO WATCH INCLUDE:

IN ARKANSAS:

HOWARD LITTLE RIVER SEVIER
$$

ARC027-057-073-091-099-139-LAC013-015-017-027-031-081-119- (UGC lines) (seg. 2)
TXC037-063-067-183-203-315-343-365-459-270100-
/O.CON.KSHV.TO.A.1002.000000T0000Z-040527T0100Z/ (P-VTEC line)

TORNADO WATCH 1002 REMAINS VALID UNTIL 700 PM CDT WEDNESDAY FOR THE
FOLLOWING COUNTIES AND PARISHES:

(Rest of text)

$$

Interpretation: WFO Shreveport, LA, issued a WCN product (using SPC's ETN 1002) on May 26, 2004 for two actions concerning the ongoing Tornado Watch event, using two segments: (1) canceled the watch on the 26th that would have remained valid until 0100 UTC on the 27th (from the P-VTEC line) for three counties in AR (from the UGC line); (2) continued watch # 1002, valid until 0100 UTC on May 27th (from the P-VTEC line) for the remaining counties in AR, LA, and TX (from the UGC line).

3.3 Severe Weather Statement (SVS) Product. The SVS product is used to provide follow-up information on a Tornado Warning or Severe Thunderstorm Warning. The SVS uses the phenomena, significance, and ETN of the original warning. Below is an example of the initial Tornado Warning for a particular state county, followed by an example of the follow-up SVS for that same county.

Initial Tornado Warning:

NYC007-161815- (UGC line)

/O.NEW.KBGM.TO.W.0003.040416T1730Z-040416T1815Z/ (P-VTEC line)

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
(rest of text)

$$

Follow-up Severe Weather Statement that Continues the Tornado Warning:

NYC007-161815- (UGC line)
/O.CON.KBGM.TO.W.0003.000000T0000Z-040416T1815Z/ (P-VTEC line)

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE OFFICE STATE
(rest of text)

$$

3.4 Marine and Coastal Weather Products. The following sub-sections provide illustration and interpretation for various marine products. Note that two sequences of complete marine products are found in Appendix C, section 1d. These sequences show the flow of events within a particular weather/marine system, e.g., from watch to warning to statement (to provide follow-up information, or to cancel the event or to let it expire).

3.4.1 Marine Forecast Products. There are four different marine and coastal forecast products that are the sole sources of W/W/A. They are the Coastal Waters Forecast (CWF), the Offshore Waters Forecast (OFF), the Great Lakes Open Lake Forecast (GLF), and the Great Lakes Nearshore Forecast (NSH). For these products, a VTEC line is used to cover all time periods, even those without ongoing watches, warnings, and advisories. For time periods without a W/W/A in effect, an action code of ROU, a phenomena code of MA, and a significance code of F will be used and the ETN will be set to all zeros (0000). Following is an example of a NSH that illustrates the use of VTEC in any of these marine forecast products. See NWSIs 10-310, 10-311, and 10-312 for information on these marine products.

Example of Marine Forecast (Nearshore Forecast - NSH) Product During Time Period Without a W/W/A:

LHZ347-348-122130- (UGC line)
/O.ROU.KAPX.MA.F.0000.041212T1530Z-041213T2130Z/ (P-VTEC line)

Interpretation: WFO North Central Lower Michigan, MI, issued a routine (no W/W/A in effect) Marine Forecast on December 12, 2004, valid from 1530 UTC on the 12th to 2130 UTC on the 13th. ETN set to all zeros (0000).

3.4.2 Coastal and Marine Product Examples. Following are examples of products that are used either solely for non-routine events (W/W/A) or as a combination of routine and non-routine events.

a. Coastal Waters Forecast (CWF) Product:

PZZ750-152230- (UGC line)
/O.ROU.KSGX.MA.F.0000.041216T0400Z-041216T2230Z/ (P-VTEC line 1)

Interpretation: Issued by WFO San Diego, CA, a Gale Warning (the 5th of the year) (for Pacific zone 750 - from the UGC line) continues until 0400 UTC on December 16, 2004 (P-VTEC line 1). No watches, warnings, or advisories are in effect from 0400 UTC on the 16th to 2230 UTC on the 16th (P-VTEC line 2).

b. Coastal Flood Warning (CFW) Product:

FLZ028-034-241400- (UGC line)
/O.CON.KTAE.CF.W.0004.000000T0000Z-040724T1400Z/ (P-VTEC line 1)
/O.EXA.KTAE.CF.W.0004.040724T0700Z-040724T1400Z/ (P-VTEC line 2)

Interpretation: Issued by WFO Tallahassee, FL, a Coastal Flood Warning (the 4th of the year) continues for Dixie Co. (FL zone 34 - from UGC line) until 1400 UTC on July 24, 2004 (P-VTEC line 1). The WFO extended in area the Coastal Flood Warning (the 4th of the year) for Taylor Co. (FL zone 28 - from the UGC line), valid from 0700 UTC until 1400 UTC on the 24th (P-VTEC line 2).

c. High Surf Advisory (MWS).

CAZ035-090200- (UGC line)
/O.NEW.KLOX.SU.Y.0001.040108T1800Z-040109T0200Z/ (P-VTEC line)

Interpretation: WFO Los Angeles issued its first High Surf Advisory of the year for Santa Barbara County (CA zone 35 - from the UGC line) on January 8, 2004, valid from 1800 UTC on the 8th to 0200 UTC on the 9th (from the P-VTEC line).

d. Lakeshore Flood Warning (CFW) Product:

NYZ010-019-122100- (UGC line)
/O.NEW.KBUF.LS.W.0005.041212T1500Z-041212T2100Z/ (P-VTEC line)

Interpretation: WFO Buffalo, NY, issued a new Lakeshore Flood Warning (5th of the year) on December 12, 2004, for Eire and Chautauqua Counties (NY zones 10 and 19 - from the UGC line), valid from 1500 UTC on the 12th until 2100 UTC on the 12th (from the P-VTEC line).

e. Open Lake Forecast (GLF) Product:

LOZ060-112000- (UGC line)
/O.CON.KBUF.MA.W.0001.000000T0000Z-041111T2200Z/ (P-VTEC line 1)
/O.ROU.KBUF.MA.F.0000.041111T2200Z-041112T1700Z/ (P-VTEC line 2)
/O.NEW.KBUF.GL.W.0003.041112T1700Z-041112T2200Z/ (P-VTEC line 3)

Interpretation: Issued by WFO Buffalo, NY, on November 11, 2004, a Special Marine Warning (1st of the year) (for Lake Ontario zone 60 - from the UGC line) continues until 2200 UTC on the 11th (from P-VTEC line 1). The routine marine forecast (no watches, warnings, or advisories) was in effect from 2200 UTC on the 11th to 1700 UTC on the 12th (from P-VTEC line 2). A Gale Warning (new issuance - the 3rd of the year) is in effect from 1700 UTC on the 12th to 2200 UTC on the 12th (from P-VTEC line 3).

f. Offshore Waters Forecast (OFF) Product:

PKZ310-082000- (UGC line)
/O.ROU.KLWX.MA.F.0000.040308T0730Z-040309T0100Z/ (P-VTEC line 1)
/O.NEW.KLWX.SR.W.0003.040309T0100Z-040309T2000Z/ (P-VTEC line 2)

Interpretation: WFO Juneau, AK, issued a routine marine forecast (OFF product), on March 8, 2004, for North Pacific zone 310 (from the UGC line), valid from 0730 UTC on the 8th until 0100 UTC on the 9th (from P-VTEC line 1). A Storm Warning (3rd of the year) was issued and in effect from 0100 UTC on the 9th to 2000 UTC on the 9th (from P-VTEC line 2).

g. Unscheduled Update of a Marine Forecast Product (Nearshore Forecast - NSH):

LHZ347-348-122130- (UGC line)
/O.ROU.KAPX.MA.F.0000.041212T1830Z-041213T0100Z/ (P-VTEC line 1)
/O.NEW.KAPX.SC.Y.0011.041213T0100Z-041213T0700Z/ (P-VTEC line 2)
/O.UPG.KAPX.SC.Y.0011.000000T0000Z-041213T0700Z/ (P-VTEC line 3)
/O.NEW.KAPX.GL.W.0007.041213T0700Z-041213T1300Z/ (P-VTEC line 4)
/O.ROU.KAPX.MA.F.0000.041213T1300Z-041213T2130Z/ (P-VTEC line 5)

Interpretation: WFO North Central Lower Michigan, MI, issued an NSH product for an unscheduled update of a Marine Forecast event on December 12, 2004, for Lake Huron zones 347 and 348 (from the UGC line). The routine Marine Forecast (no W/W/A in effect) is in effect from 1830 UTC on the 12th until 0100 UTC on the 13th (from P-VTEC line 1). A Small Craft Advisory (11th of the year) is in effect from 0100 UTC on the 13th to 0700 UTC on the 13th (from P-VTEC line 2). The Small Craft Advisory was upgraded (from P-VTEC line 3) to a Gale Warning. The Gale Warning is in effect from 0700 UTC on the 13th to 1300 UTC on the 13th (from P-VTEC line 4). No W/W/A in effect from 1300 UTC on the 13th to 2130 UTC on the 13th (from P-VTEC line 5).

h. Coastal Waters Forecast (CWF) Product with Tornado Watch Issued by the SPC:

AMZ650-651-670-671-272030- (UGC line)
/O.NEW.KMFL.TO.A.0392.040527T1700Z-040527T2300Z/ (P-VTEC line)

Interpretation: The CWF product issued by WFO Miami, FL, on May 27, 2004, contains a Tornado Watch issued by the SPC (Tornado Watch # 392) (for south Atlantic marine zones 650, 651, 670,671 - from the UGC line). The Tornado Watch is valid from 1700 UTC to 2300 UTC on the 27th.

3.4.3. VTEC Coding for Tropical Cyclones. VTEC coding for tropical cyclones are carried only in the standalone Tropical Cyclone Product (for VTEC) (TCV) (see section 3.5). No marine products will include VTEC strings for tropical cyclones, however, the Marine Forecast product will always carry the tropical headline in the text.

3.5 Tropical Cyclone Product for VTEC (TCV). The only product to use the tropical cyclone VTEC will be the TCV (no other products will carry any tropical cyclone VTEC strings). The TCV provides VTEC strings for tropical storm and hurricane watch/warnings only for the Atlantic basin, including the Caribbean and Gulf of Mexico. The TCV will also include the UGC for the appropriate coastal public zones, marine zones (CWF) and the respective latitudes and longitudes for the break points that bracket the watches/warnings..

Implementation plans for the proposed new TCV product are to include an experimental phase for the 2005 tropical cyclone season and, if successful, to become operational in 2006. Updates to NWSI 10-601, Tropical Cyclone Products, and to the VTEC Implementation Plan will contain additional information regarding format of the TCV product and examples of VTEC strings.

4. Hydrologic H-VTEC Format. The specialized H-VTEC line in hydrologic products occurs only in conjunction with, and immediately after, the P-VTEC line. The H-VTEC only follows a P-VTEC that has a Phenomena Code of FL for Flood or FF for Flash Flood. For site specific River Flood Warnings (FLW), the H-VTEC specifies the flood severity, immediate cause, timing of flood beginning, crest, and end, including how the flood compares to the flood of record. For Flash Flood Warnings (FFW) and Areal Flood Warnings (FLW), H-VTEC will have an entry for immediate cause (IC) but default entries of zeros for the remaining elements.

4.1 Generic Structure of H-VTEC Elements.

/s.ic.ddThhnnZ_B.ddThhnnZ_C.ddThhnnZ_E.fr/

where "s," "ic," and "fr" describe properties of the flood event, and the ddThhnnZ_B.ddThhmmZ_C.ddThhmmZ_E provides the timing in UTC.

Event Group		Date/Time Group	
s	- Flood Severity	**dd** -	Day
ic	- Immediate Cause	**T** -	Fixed Time Indicator
fr	- Flood Record	**hh** -	Hour in UTC
		nn -	Minute in UTC
		Z_B -	Fixed UTC Flood Beginning Date/Time Indicator
		Z_C -	Fixed UTC Flood Crest Date/Time Indicator
		Z_E -	Fixed UTC Flood Ending Date/Time Indicator

Notes:
(1) The "T" in the Date/Time Groups is a fixed Time Indicator, with the following "hh" and "nn" being the hours and minutes in UTC, respectively.
(2) The Z_B, Z_C, and Z_E are the generic fixed UTC indicators for the flood beginning, crest, and ending times. Note that the subscripts are not used in any actual VTEC strings in examples
(3) The forward slash ('/') and period ('**.**') in the format are delimiters that separate fields for ease in decoding.

4.2 H-VTEC Element Definitions/Explanations.

4.2.1 **s** (Flood Severity). Identifies the severity of the flood (for main stem rivers). This element does not apply to Flash Flood events. See Appendix B for Flood Severity codes.

4.2.2 **ic** (Immediate Cause). Identifies the immediate cause of the flood. See Appendix B for Immediate Cause codes.

4.2.3 **ddThhnnZ_B.ddThhnnZ_C.ddThhnnZ_E** (Flood Timing). These groups, respectively, identify the beginning, crest, and end of the flood event by day, hour and minute in UTC.

4.2.4 **fr** (Flood Record Status). Identifies how the flood compares to the flood of record. This element does not apply to Flash Flood events. See Appendix B for the Flood Record Status codes.

Example (for complete example, see Section 5 and Appendix C, Section 2):

NYC103-141800-	(UGC line)
/O.NEW.KOKX.FF.W.0002.040814T1655Z-040814T1800Z/	(P-VTEC line)
/0.ER.00T0000Z.00T0000Z.00T0000Z.0/	(H-VTEC line)

Interpretation: WFO New York City issued the 2nd Flash Flood Warning (product and event the same) of the year on August 14, 2004, valid from 1655 UTC to 1800 UTC (from the P-VTEC line), for Suffolk County in New York (from the UGC line). Note that the flood elements were not known (as is typical) for the Flash Flood Warning, except for the reason for the flood, "ER," excessive rainfall.

5. A Complete (Non-Segmented) Sample Product. See NWSI 10-1701 for details of overall product format, headers, and structure, and NWSI 10-922, WFO Hydrologic Products Specification, for specific details of hydrologic W/W/A products.

WGUS41 KCAR 241530
FLWCAR
MEZ002-250315- (UGC line)
/O.NEW.KCAR.FL.W.0003.040424T1530Z-040428T0000Z/ (P-VTEC line)
/1.ER.25T1600Z.26T0000Z.28T0000Z.NO/ (H-VTEC line)

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE CARIBOU ME
1130 AM EDT SAT APR 24 2004

...THE NATIONAL WEATHER SERVICE HAS ISSUED A FLOOD WARNING FOR THE ST JOHN RIVER AT FT KENT...

AT 11 AM EDT...THE RIVER STAGE AT FORT KENT WAS 15.33 FEET.
FLOOD STAGE IS 20 FEET. THE RECENT HEAVY RAINS HAVE ALLOWED THE RIVER TO RISE. THE RIVER IS EXPECTED TO GO ABOVE FLOOD STAGE AT NOON EDT SUNDAY APRIL 25 AND IS EXPECTED TO CREST AT 21.1 FEET AT 8 PM EDT SUNDAY.

$$

Interpretation: WFO Caribou, ME, issued an FLW (the 3rd of the year) on April 24, 2004, valid from 1530 UTC on the 24th to 0000 UTC on 28th (from the P- VTEC line) (for Maine Zone 2 - from the UGC line). The minor flood was caused by excessive rainfall, was not expected to be a record, with the flood expected to begin on April 25 about 1600 UTC, crest on the 26th about 0000 UTC, and end on the 28th about 0000 UTC (from the H-VTEC line).

APPENDIX A - Listing of P-VTEC Elements

Generic P-VTEC Structure

/k.aaa.cccc.pp.s.####.yymmddThhnnZ$_B$-yymmddThhnnZ$_E$/

ACTIONS (aaa)

NEW	NEW EVENT
CON	EVENT CONTINUED
EXT	EVENT EXTENDED (TIME)
EXA	EVENT EXTENDED (AREA)
EXB	EVENT EXTENDED (BOTH TIME AND AREA)
CAN	EVENT CANCELED
UPG	EVENT UPGRADED
EXP	EVENT EXPIRED
COR	CORRECTED
ROU	ROUTINE

SIGNIFICANCE (s)

W	WARNING
A	WATCH
Y	ADVISORY
S	STATEMENT
O	OUTLOOK
F	FORECAST
N	SYNOPSIS

PHENOMENA (pp)

BZ	BLIZZARD
WS	WINTER STORM
WW	WINTER WEATHER
SN	SNOW
HS	HEAVY SNOW
LE	LAKE EFFECT SNOW
BS	BLOWING/DRIFTING SNOW
SB	SNOW AND BLOWING SNOW
IP	SLEET
HP	HEAVY SLEET
ZR	FREEZING RAIN
IS	ICE STORM
FZ	FREEZE
ZF	FREEZING FOG
FR	FROST
WC	WIND CHILL
EC	EXTREME COLD
WI	WIND
HW	HIGH WIND
LW	LAKE WIND
FG	DENSE FOG
SM	DENSE SMOKE
HT	HEAT
EH	EXCESSIVE HEAT
DU	BLOWING DUST
DS	DUST STORM
FL	FLOOD
FF	FLASH FLOOD
SV	SEVERE THUNDERSTORM
TO	TORNADO
FW	FIRE WEATHER (RFW, FWW)
RF	RED FLAG WARNING
RH	RADIOLOGICAL HAZARD
VO	VOLCANO
AF	VOLCANIC ASHFALL
AS	AIR STAGNATION
AV	AVALANCHE
TS	TSUNAMI
MA	MARINE
SC	SMALL CRAFT
GL	GALE
SR	STORM
HF	HURRICANE FORCE WIND
TR	TROPICAL STORM
HU	HURRICANE
TY	TYPHOON
TI	INLAND TROPICAL STORM WIND
HI	INLAND HURRICANE WIND
LS	LAKESHORE FLOOD
CF	COASTAL FLOOD
UP	ICE ACCRETION
LO	LOW WATER
SU	HIGH SURF

Note: Additional codes will be added as needed for future text products.

APPENDIX B - Listing of H-VTEC Elements

Generic H-VTEC Structure

/s.ic.ddThhnnZ_B.ddThhnnZ_C.ddThhnnZ_E.fr/

Flood Severity (s)	**Immediate Cause (ic)**
N - None	ER - Excessive Rainfall
0 - for Flash Flood Warnings and Areal Flood Warnings	SM - Snow melt
1 - Minor	RS - Rain and Snow melt
2 - Moderate	DM - Dam or Levee Failure
3 - Major	GO - Glacier-Dammed Lake Outburst
U - Unknown	IJ - Ice Jam
	IC - Rain and/or Snow melt and/or Ice Jam
	UU - Unknown
Flood Timing	**Flood Record Status (fr)**
ddThhnnZ_B - Begin	OO - for Flash Flood Warnings and Areal Flood Warnings
ddThhnnZ_C - Crest	NO - A record flood is not expected
ddThhnnZ_E - End	NR - Near record or record flood expected
	UU - Flood without a period of record to compare

Note: Additional codes will be added as needed for future text products.

APPENDIX C - Examples and Interpretations

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1. P-VTEC Examples and Interpretations. Following are examples of P-VTEC lines and interpretations (including the preceding UGC line that defines the affected geographic area and product purge time) for (a) single event within one segment, (b) multiple events within one segment, (c) change to an event, and (d) complete sample products.

   a. Single Event - Within one product segment, with one UGC grouping.

Example (1) - New Dense Fog Advisory

VAZ088>098-261300- (UGC line)
/O.NEW.KAKQ.FG.Y.0009.041226T0700Z-041226T1400Z/ (P-VTEC line)

Interpretation: WFO Wakefield, VA, issued an NPW product on December 26, 2004, for its ninth Dense Fog Advisory event (of the calendar year), valid from 0700 UTC to1400 UTC on the 26th (P-VTEC line) (for VA zones 88 through 98 - from the UGC line).

Example (2) - Canceled a Blizzard Watch

NDZ002>005-010>013-018>023-221800- (UGC line)
/O.CAN.KBIS.BZ.A.0002.000000T0000Z-040122T1900Z/ (P-VTEC line)

Interpretation: WFO Bismarck, ND, issued a WSW product on January 22, 2004, to cancel a Blizzard Watch (the second of the year), within the valid time of the event, effective at 1900 UTC (P-VTEC line) (for ND zones 2-5, 10-13, and 18-23 - from the UGC line).

Example (3) - Test Excessive Heat Warning

MSZ049-081400- (UGC line)

/T.NEW.KJAN.EH.W.0002.040408T1415Z-040408T1445Z/ (P-VTEC line)

Interpretation: WFO Jackson, MS, issued a new NPW product on April 8, 2004, for a test Excessive Heat Warning event (the 2nd of the year), valid from 1415 UTC to1445 UTC, (P-VTEC line) (for MS zone 49 - from the UGC line).

b. Multiple Events - Within one segment, with one UGC grouping.

Example - New Dust Storm Warning/Continued High Wind Warning - requires two P-VTEC lines

AZZ022-023-027-028-122330 (UGC line)
/O.NEW.KPSR.DS.W.0005.041112T1730Z-041113T0300Z/ (P-VTEC line 1)
/O.CON.KPSR.HW.W.0009.000000T0000Z-041113T2100Z/ (P-VTEC line 2)

Interpretation: WFO Phoenix, AZ, issued a NPW product on November 12, 2004, for two events within the same segment (AZ zones 22, 23, 27, 28 - from the UGC line): (1) its 5th Dust Storm Warning, valid from 1730 UTC on the 12th until 0300 UTC on the 13th (P-VTEC line 1); and (2) continued a High Wind Warning (its 9th of the year), valid until 2100 UTC on the 13th (P-VTEC line 2).

c. Change to an Event - Requires multiple VTECs, and for the following two examples, multiple segments.

Example (1) - Upgrade part of Winter Storm Watch to a Heavy Snow Warning - requires two segments: Segment one has two P-VTEC lines, segment two has one P-VTEC line.

(segment 1 of 2 within WSW product)
TXZ001>010-180400- (UGC line)
/O.UPG.KAMA.WS.A.0011.000000T0000Z-041218T0800Z/ (P-VTEC line 1)
/O.NEW.KAMA.SN.W.0007.041217T2200Z-041218T0800Z/ (P-VTEC line 2)

(segment 2 of 2 within WSW product)
TXZ011>020-180400- (UGC line)
/O.CON.KAMA.WS.A.0011.000000T0000Z-041218T0800Z/ (P-VTEC line)

Interpretation (broad view - specific information in individual segments below): A Winter Storm Watch event was in effect for WFO Amarillo, TX, zones 1-20. The WFO then issued a WSW product on December 17, 2004, upgrading part of the watch event (TX zones 1-10 - from the UGC line, segment 1) to a Heavy Snow Warning event, while the rest of the watch area (TX zones 11-20, from the UGC line, segment 2) continued unchanged. Two segments are used:

Segment one (Texas zones 1-10):
Two P-VTEC lines are used: P-VTEC line 1 provides "closure" of TX zones 1-10 that were originally under the 11th Winter Storm Watch event of the year (which was to have expired on

December 18, 2004, at 0800 UTC. P-VTEC line 2 begins the upgrade as a new Heavy Snow Warning event (the 7th of the year), valid from December 17, 2004, at 2200 UTC to the 18th at 0800 UTC.

Segment two (Texas zones 11-20):
The one P-VTEC line continues the Winter Storm Watch event (the 11th of the year) for the remaining TX zones 11-20, valid until December 18, 2003, at 0800 UTC.

Example (2) - Cancel part of Winter Storm Warning, downgrade part of Warning to Snow Advisory, extend Warning into new area - requires three segments: Segments one and three each have one P-VTEC line, segment two has two P-VTEC lines.

(Segment 1 of 3 within WSW product - cancel part of warning)
MTZ059-061-232200- (UGC line)
/O.CAN.KGGW.WS.W.0004.000000T0000Z-040323T2200Z/ (P-VTEC line)

(Segment 2 of 3 within WSW product - downgrade part of warning to advisory)
MTZ016>024-060-062-232200- (UGC line)
/O.CAN.KGGW.WS.W.0004.000000T0000Z-040323T2200Z/ (P-VTEC line 1)
/O.NEW.KGGW.SN.Y.0008.040323T1600Z-040323T2200Z/ (P-VTEC line 2)

(Segment 3 of 3 within WSW product - extend warning into new area)
MTZ025>027-232200- (UGC line)
/O.EXA.KGGW.WS.W.0004.000000T0000Z-040323T2200Z/ (P-VTEC line)

Interpretation (broad view - specific information in individual segments below): On March 23, 2004, a Winter Storm Warning event was in effect for WFO Glasgow, MT, zones 16-25 and 59-62. The WFO then issued a WSW product canceling part of the warning (MT zones 59 and 61- from the UGC line, segment 1), downgrading part of the warning to an advisory (MT zones 16-24, 60 and 62 - from the UGC line, segment 2), and extending the warning in area (MT zones 26-27 - from the UGC line, segment 3), while keeping MT zone 25 in the warning.

Segment 1 (MT zones 59 and 61): The one P-VTEC line is used to cancel the Winter Storm Warning event (the 4th of the year) for MT zones 59 and 61, valid at time of issuance of the WSW product. Note that the valid beginning time are all zeros, since the action (cancel) occurred after the warning was already in effect.

Segment 2 (MT zones 16-24): Two P-VTEC lines are used: P-VTEC line 1 cancels the Winter Storm Warning for MT zones 16-24, 60 and 62 at time of issuance of the WSW product (which was to have expired on March 23, 2004, at 2200 UTC). P-VTEC line 2 "downgrades" the warning for MT zones 16-24, 60 and 62 to a new Snow Advisory event, valid from March 23, 2004, at 1600 UTC until the 23rd at 2200 UTC.

Segment 3 (MT zones 25-27): The one P-VTEC line is used to extend the Winter Storm Warning in area to MT zones 26-27 (in addition to keeping zone 25 in the warning), valid from March 23, 2004 at time of issuance until the 23rd at 2200 UTC.

d. Complete Sample Products. Note that examples 2 and 3 show a sequence of products. These sequences illustrate the flow of events and VTEC within a particular weather/marine system, e.g., from watch to warning to statement (to provide follow-up information, or to cancel the event or let it expire).

Example (1) - Canceled a Winter Storm Warning and extended a Lake Effect Snow Advisory - requires two P-VTEC lines. (See NWSI 10-1701 for details of overall product format and headers.)

WWUS41 KBUF 300628
WSWBUF

URGENT - WINTER WEATHER MESSAGE
NATIONAL WEATHER SERVICE BUFFALO NY
130 AM EST TUE NOV 30 2004

...THE WINTER STORM WATCH FOR TUESDAY NIGHT FOR WESTERN NEW YORK HAS BEEN CANCELED...
...A LAKE EFFECT SNOW ADVISORY IS IN EFFECT FOR EASTERN LAKE ONTARIO COUNTIES TODAY AND IS EXTENDED THROUGH EARLY WEDNESDAY MORNING...

.WEST WINDS WILL DEVELOP LATE THIS MORNING AND BRING LAKE EFFECT SNOW TO COUNTIES EAST OF LAKE ONTARIO.

NYZ006>008-301230- (UGC line)
/O.CAN.KBUF.WS.A.0013.000000T0000Z-041201T1230Z/ (P-VTEC line 1)
/O.EXT.KBUF.LE.Y.0021.041130T1400Z-041201T0700Z/ (P-VTEC line 2)
NORTHWEST COAST-
INCLUDING THE CITIES OF...OSWEGO...WATERTOWN

(TEXT - including repeat of headlines)

$$

(Other segments, as appropriate)

Interpretation: WFO Buffalo, NY, issued a WSW product on November 30, 2004, at 1:30 a.m. (for NY zones 6-8 - from the UGC line). The WSW product canceled the Winter Storm Watch event (the 13th of the year) that would have been valid until 1230 UTC on December 1 (from P-VTEC line 1). The WSW product also extended the Lake Effect Snow Advisory event (the 21st of the year), valid until 0700 UTC on December 1 (from P-VTEC line 2).

Example (2) - Sequence of examples for Special Marine Warning and Marine Weather Statements
Initial Warning -

WHUS53 KLOT 232205
SMWCHI
LMZ740-LMZ766-232300- (UGC line)
/O.NEW.KLOT.MA.W.0034.040723T2204Z-040723T2300Z/ (P-VTEC line)

BULLETIN - IMMEDIATE BROADCAST REQUESTED
SPECIAL MARINE WARNING
NATIONAL WEATHER SERVICE CHICAGO IL
504 PM CDT FRI JUL 23 2004

THE NATIONAL WEATHER SERVICE IN CHICAGO
HAS ISSUED A

* SPECIAL MARINE WARNING FOR...
  WINTHROP HARBOR TO WILMETTE HARBOR IL OVER LAKE MICHIGAN
  OUT TO MID LAKE

* UNTIL 6 PM CDT

* AT 455 PM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A LINE OF STRONG THUNDERSTORMS FROM NEAR RACINE WISCONSIN SOUTHWESTWARD INLAND TO NEAR WAUCONDA ILLINOIS...MOVING SOUTHEAST AT 30 MPH.

$$

Interpretation: WFO Chicago, IL, issued a new Special Marine Warning (product and event the same), the 34th of the year, for part of Lake Michigan (LM zones 740 and 766 from the UGC line), valid July 23, 2004, from 2204 UTC to 2300 UTC (from the P-VTEC line).

Update -

FZUS73 KLOT 232230
MWSCHI
LMZ740-LMZ766-232300- (UGC line)
/O.CON.KLOT.MA.W.0034.000000T0000Z-040723T2300Z/ (P-VTEC line)

MARINE WEATHER STATEMENT
NATIONAL WEATHER SERVICE CHICAGO IL
530 PM CDT FRI JUL 23 2004

...SPECIAL MARINE WARNING REMAINS IN EFFECT FOR WINTHROP HARBOR TO WILMETTE HARBOR IL OVER LAKE MICHIGAN OUT TO MID LAKE UNTIL 6 PM...

AT 525 PM...A LINE OF STRONG THUNDERSTORMS CONTINUED FROM NEAR RACINE WISCONSIN SOUTHWESTWARD INLAND TO NEAR WAUCONDA ILLINOIS. AT 523 PM...A MARINER REPORTED GOLFBALL SIZE HAIL ON LAKE MICHIGAN 5 MILES SOUTHEAST OF RACINE. THESE STORMS WILL CONTINUE MOVING SOUTHEAST AT 30 MPH.

$$

Interpretation: WFO Chicago, IL, then issued a follow-up Marine Weather Statement (product and event the same - using the "continued - CON" action code and retaining the same ETN 34) on July 23, 2004, at 2230 UTC, providing updated information on the previously issued warning, valid until 2300 UTC (from the P-VTEC line) for the same LM zones 740 and 766 (from the UGC line).

Cancel -

FZUS73 KLOT 232235
MWSCHI
LMZ740-LMZ766-232300- (UGC line)
/O.CAN.KLOT.MA.W.0034.000000T0000Z-040723T2300Z/ (P-VTEC line)

MARINE WEATHER STATEMENT
NATIONAL WEATHER SERVICE CHICAGO IL
535 PM CDT FRI JUL 23 2004

...SPECIAL MARINE WARNING FOR WINTHROP HARBOR TO WILMETTE HARBOR IL OVER LAKE MICHIGAN OUT TO MID LAKE CANCELED...

A LINE OF THUNDERSTORMS FROM NEAR RACINE WISCONSIN SOUTHWESTWARD TO NEAR WAUCONDA ILLINOIS HAVE DISSIPATED. THEREFORE THE SPECIAL MARINE WARNING HAS BEEN CANCELED.

$$

Interpretation: WFO Chicago, IL, then issued a Marine Weather Statement (product and event the same) on July 23, 2004 at 2235 UTC, to cancel the previously issued warning (using the "cancel - CAN" action code) before it was to have expired (on the 23rd at 2300 UTC), and retaining the same ETN 34 (from the P-VTEC line), for the same LM zones 740 and 766 (from the UGC line).

Expire -

FZUS73 KLOT 232300
MWSCHI
LMZ740-LMZ766-232300- (UGC line)
/O.EXP.KLOT.MA.W.0034.000000T0000Z-040723T2300Z/ (P-VTEC line)

MARINE WEATHER STATEMENT
NATIONAL WEATHER SERVICE CHICAGO IL
600 PM CDT FRI JUL 23 2004

...SPECIAL MARINE WARNING FOR WINTHROP HARBOR TO WILMETTE HARBOR IL OVER LAKE MICHIGAN OUT TO MID LAKE HAS EXPIRED...

A LINE OF THUNDERSTORMS FROM NEAR RACINE WISCONSIN SOUTHWESTWARD TO NEAR WAUCONDA ILLINOIS HAS DISSIPATED. THEREFORE THE SPECIAL MARINE WARNING HAS BEEN ALLOWED TO EXPIRE.

$$

Interpretation: In this situation, the previously issued warning from WFO Chicago, IL was allowed to expire. The WFO issued a Marine Weather Statement (product and event the same) (using the EXP action code and the same ETN 34) on July 23, 2004, valid at 2300 UTC (from the P-VTEC line), for the same LM zones 744 and 766 (from the UGC line).

Example (3) - Sequence of examples for Coastal Flood Watch, Coastal Flood Warning, and Coastal Flood Statements

Initial Watch -

WHUS61 KBUF 092042
CFWBUF
NYZ010-101000- (UGC line)
/O.NEW.KBUF.LS.A.0007.040309T2040Z-040310T1000Z/ (P-VTEC line)

LAKESHORE FLOOD WATCH
NATIONAL WEATHER SERVICE BUFFALO NY
340 PM EST TUE MAR 9 2004

...LAKESHORE FLOOD WATCH IS IN EFFECT FROM DUNKIRK TO BUFFALO TONIGHT...

WINDS OVER 50 KNOTS ON LAKE ERIE WILL CAUSE WATER LEVELS TO RISE AT THE EASTERN END OF THE LAKE. HIGH WAVES SHOULD CAUSE SIGNIFICANT EROSION ALONG THE LAKE SHORE. RESIDENTS ALONG THE SHORE OF LAKE ERIE SHOULD PROTECT THEIR PROPERTY.

$$

Interpretation: WFO Buffalo, NY, issued a Coastal Flood W/W/A product for its "NEW" 7th Lakeshore Flood Watch event on March 9, 2004, valid from 2040 UTC to 1000 UTC on the 10th (from the P-VTEC line) for NY zone 10 (from the UGC line).

Initial Warning -

WHUS61 KBUF 100242
CFWBUF
NYZ010-101000- (UGC line)
/O.NEW.KBUF.LS.W.0009.040310T0240Z-040310T1000Z/ (P-VTEC line)

LAKESHORE FLOOD WARNING
NATIONAL WEATHER SERVICE BUFFALO NY
940 PM EST TUE MAR 9 2004

...LAKESHORE FLOOD WARNING IS IN EFFECT FROM DUNKIRK TO BUFFALO TONIGHT...

WINDS OVER 50 KNOTS ON LAKE ERIE HAVE CAUSED WATER LEVELS TO RISE AT THE EASTERN END OF THE LAKE. THE LAKE IS EXPECTED TO CREST AT 9 FEET AROUND MIDNIGHT THEN FALL SLOWLY OVERNIGHT. WAVES TO 15 FEET WILL CAUSE SIGNIFICANT EROSION ALONG THE LAKE SHORE. RESIDENTS ALONG THE SHORE OF LAKE ERIE SHOULD PROTECT THEIR PROPERTY.

$$

Interpretation: WFO Buffalo, NY, then issued a Coastal Flood W/W/A product for its "NEW" (9th) Lakeshore Flood Warning event (replacing the watch) on March 10, 2004, valid from 0240 UTC to 1000 UTC, for the same NY zone 10 (from the UGC line).

Update -

WHUS61 KBUF 100542
CFWBUF
NYZ010-101000- (UGC line)
/O.CON.KBUF.LS.W.0009.000000T0000Z-040310T1000Z/ (P-VTEC line)

LAKESHORE FLOOD STATEMENT
NATIONAL WEATHER SERVICE BUFFALO NY
1240 AM EST WED MAR 10 2004

...LAKESHORE FLOOD WARNING CONTINUES IN EFFECT FROM DUNKIRK TO BUFFALO THE REST OF TONIGHT...

(text)

$$

Interpretation: WFO Buffalo, NY, then issued a Coastal Flood W/W/A product for a Lakeshore Flood Statement event (retaining the same ETN 9) on March 10, 2004, at 0540 UTC, providing follow-up information on the previously issued warning ("Continuing the event - CON"), valid to 1000 UTC (from the P-VTEC line), for the same NY zone 10 (from the UGC line).

Note: If the statement had been issued to update a watch, then the headings, communications identifiers, and UGC would remain the same. The VTEC would be almost the same except the significance element would be for a watch, i.e.,
/O.CON.KBUF.LS.A.0007.000000T0000Z-040310T1000Z/

Cancel -

WHUS61 KBUF 100742
CFWBUF
NYZ010-101000- (UGC line)
/O.CAN.KBUF.LS.W.0009.000000T0000Z-040310T1000Z/ (P-VTEC line)

LAKESHORE FLOOD STATEMENT
NATIONAL WEATHER SERVICE BUFFALO NY
240 AM EST WED MAR 10 2004

...LAKESHORE FLOOD WARNING FROM DUNKIRK TO BUFFALO CANCELED...

(text)

$$

Interpretation: WFO Buffalo, NY, then issued a Coastal Flood W/W/A product for a Lakeshore Flood Statement event (retaining the same ETN 9) on March 10, 2004, canceling (CAN) the warning at 0742 UTC (from the P-VTEC line), for the same NY zone 10 (from the UGC line).

Expire -

WHUS61 KBUF 101000
CFWBUF
NYZ010-101000-
/O.EXP.KBUF.LS.W.0009.000000T0000Z-040310T1000Z/

LAKESHORE FLOOD STATEMENT
NATIONAL WEATHER SERVICE BUFFALO NY
500 AM EST WED MAR 10 2004

...LAKESHORE FLOOD WARNING FROM DUNKIRK TO BUFFALO HAS EXPIRED...

(text)

$$

Interpretation: WFO Buffalo, NY, issued a Coastal Flood W/W/A product for a Lakeshore Flood Statement event (retaining the same ETN 9) on March 10, 2004, at 1000 UTC, allowing the event to expire (EXP) (from the P-VTEC line), for the same NY zone 10 (from the UGC line).

2. P-VTEC and H-VTEC Examples and Interpretations. Following are examples with interpretations of certain flood products using P-VTEC and H-VTEC lines (including the preceding UGC line that defines the affected geographic area and product purge time) for (a) Flash Flood Warning, (b) Areal Flood Warning, (c) River Flood Warning, (d) River Flood Statement, and (e) combined Severe Thunderstorm and Flash Flood Warning.

a. Flash Flood Warning (FFW).

Example - New Flash Flood Warning caused by excessive rainfall - requires P-VTEC and H-VTEC lines in one segment.

WGUS51 KOKX 141656
FFWOKX
NYC103-141800- (UGC line)
/O.NEW.KOKX.FF.W.0002.040814T1655Z-040814T1800Z/ (P-VTEC line)
/0.ER.00T0000Z.00T0000Z.00T0000Z.0/ (H-VTEC line)

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE NEW YORK NY
1255 PM EDT SAT AUG 14 2004

THE NATIONAL WEATHER SERVICE IN UPTON NY HAS ISSUED A

* FLASH FLOOD WARNING FOR
  SOUTHWEST SUFFOLK COUNTY IN SOUTHEASTERN NEW YORK STATE

* UNTIL 200 PM EDT

* AT 1254 PM NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED

THUNDERSTORMS MOVING NORTHWEST TOWARD THE WARNED AREA.
RAINFALL RATES FROM 2 TO 3 INCHES PER HOUR WILL CAUSE FLASH
FLOODING OF LOW LYING AND POOR DRAINAGE AREAS.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROADWAY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED. MOVE TO HIGHER GROUND IMMEDIATELY.

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST OFFICE IN UPTON.

D

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Interpretation: WFO New York City issued the 2nd Flash Flood Warning (product and event the same) of the year on August 14, 2004, valid from 1655 UTC to 1800 UTC (from the P-VTEC line), for Suffolk County (NY county 1[illegible] - from the UGC line). Note that the flood elements were not known (as is typical) for the Flash Flood Warning, except for the reason for the flood, "ER," excessive rainfall.

R

b. Areal Flood Warning (FLW).

A

Example - New (widespread) Flood Warning caused by excessive rainfall above dam - requires P-VTEC and H-VTEC lines in one segment

WGUS46 KOTX 061803
FLWOTX
WAC051-070100- (UGC line)
/O.NEW.KOTX.FL.W.0001.040606T1803Z-040607T[illegible]00Z/ (P-VTEC line)
/0.ER.00T0000Z.00T0000Z.00T0000Z.0/ (H-VTEC line)

F

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SPOKANE WA
1102 AM PDT SUN JUN 6 2004

T

...FLOOD WARNING HAS BEEN ISSUED FOR THE PEND OREILLE RIVER IN PEND OREILLE COUNTY IN NORTHEAST WASHINGTON...

ON THE PEND OREILLE RIVER BELOW ALBENI FALLS DAM...THE MOST RECENT READING WAS 91800 CFS AT 10 AM THURSDAY. THE FLOOD FLOW IS 100000 CFS. THE OUTFLOW FROM ALBENI FALLS DAM IS FORECAST TO REMAIN BETWEEN 90000 AND 95000 CFS THROUGH MONDAY.

THOUGH THE RIVER IS CURRENTLY BELOW THE FLOOD FLOW...MINOR FLOODING IS BEING REPORTED ALONG THE RIVER DOWNSTREAM FROM NEWPORT TO THE CANADIAN BORDER. SEVERAL STRUCTURES ARE FLOODED AND SOME SAND BAGGING OPERATIONS ARE OCCURRING. ANY RAINFALL WILL ADD TO THE EXISTING HIGH FLOW.

BOATERS AND PERSONS WITH INTERESTS ALONG THE PEND OREILLE RIVER ARE URGED TO USE EXTREME CAUTION WHEN NEAR OR ON THE RIVER. STAY TUNED TO FURTHER DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO OR YOUR LOCAL TV OR RADIO STATIONS.

$$

Interpretation: WFO Spokane, WA issued its 1st Flood Warning (product and event the same) of the year on June 6, 2004, valid from 1800 UTC to 0100 UTC on the 7th (from the P-VTEC line), for the Pend Oreille River in Pend Oreille Co. (from the UGC line). The flood elements (as is typical) were not known for this widespread real flood, except that the cause of flooding, "ER," excessive rainfall, was known to have occurred above the dam.

c. River Flood Warning (FLW).

Example - New Flood Warning caused by excessive rainfall for three locations along river - requires P-VTEC and H-VTEC for each of three segments

WGUS43 KFSD 141205
FLWFSD

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WARNING
NATIONAL WEATHER SERVICE SIOUX FALLS SD
605 AM CST TUE DEC 14 2004

THE NATIONAL WEATHER SERVICE IN SIOUX FALLS HAS ISSUED A

FLOOD WARNING FOR THE FOLLOWING RIVER LOCATIONS IN SOUTHEAST SOUTH DAKOTA AND WESTERN IOWA...
BIG SIOUX RIVER NEAR BROOKINGS
BIG SIOUX RIVER NEAR DELL RAPIDS
BIG SIOUX RIVER AT AKRON

(text)

SDC011-101-150005- (UGC line) (segment 1)
/O.NEW.KFSD.FL.W.0007.041214T1205Z-041220T1200Z/ (P-VTEC line)

/2.ER.16T1600Z.18T1600Z.19T1900Z.NO/ (H-VTEC line)

(text)

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SDC099-150005- (UGC line) (segment 2)
/O.NEW.KFSD.FL.W.0007.041214T1205Z-041220T1200Z/ (P-VTEC line)
/3.ER.17T0400Z.18T1700Z.20T0200Z.NO/ (H-VTEC line)

(text)

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IAC149-SDC127-150005- (UGC line) (segment 3)
/O.NEW.KFSD.FL.W.0007.041214T1205Z-041220T1200Z/ (P-VTEC line)
/2.ER.17T0400Z.18T1900Z.20T1200Z.NO/ (H-VTEC line)

(text)

$$

Interpretation (broad view - specific information in individual segments below): WFO Sioux Falls, SD, issued a Flood Warning (product and event the same) (the 7th of the year) for the Big Sioux River in southeast SD and western IO, on December 14, 2004, valid from 1205 UTC on December 14 until 1200 UTC on December 20 (applies to all three segments).

Segment 1 (Big Sioux River in Brookings and Moody Counties, SD): The moderate flood (2) was caused by excessive rainfall, was not expected to be a record, with the flood expected to begin on December 16 about 1600 UTC, crest on the 18th about 1600 UTC, and end on the 19th about 1900 UTC (from the H-VTEC line).

Segment 2 (Big Sioux River in Minnehaha Co., SD): The major flood (3) was caused by excessive rainfall, was not expected to be a record, with the flood expected to begin on December 17 about 0400 UTC, crest on the 18th at 1700 UTC, and end on the 20th about 0200 UTC.

Segment 3 (Big Sioux River in Plymouth Co., IA and Union Co., SD): The moderate flood (2) was caused by excessive rainfall, was not expected to be a record, with the flood expected to begin on the 17th about 0400 UTC, crest on the 18th about 1900 UTC, and end on the 20th about 1200 UTC.

d. River Flood Statement (FLS).

Example - FLS canceled Flood Warnings for two locations on river - requires P-VTEC and H- VTEC lines for each of two segments

RWUS42 KDVN 031536
FLSMLI

FLOOD STATEMENT
NATIONAL WEATHER SERVICE QUAD CITIES IA IL
1035 AM CDT MON MAY 03 2004

...THE FLOOD WARNINGS FOR GLADSTONE AND BURLINGTON ON THE MISSISSIPPI RIVER ARE NO LONGER IN EFFECT...

IAZ089-ILZ025-032130- (UGC line) (segment 1)
/O.CAN.KDVN.FL.W.0009.000000T0000Z-040503T1535Z/ (P-VTEC line)
/1.ER.26T2000Z.30T1100Z.03T1300Z.NO/ (H-VTEC line)

MISSISSIPPI RIVER NEAR GLADSTONE
* 9 AM STAGE: 9.9 FT.
* FLOOD STAGE: 10.0 FT.
* CRESTED 11.19 FT AT 5 AM APRIL 30TH.
* FELL BELOW FLOOD STAGE AT 8 AM THIS MORNING AND WILL CONTINUE TO FALL.
* THIS WILL BE THE LAST STATEMENT FOR THIS LOCATION FOR THIS EVENT.

$$

IAZ099-ILZ034-032130- (UGC line) (segment 2)
/O.CAN.KDVN.FL.W.0009.000000T0000Z-040503T1535Z/ (P-VTEC line)
/1.ER.26T2000Z.29T2300Z.03T1535Z.NO/ (H-VTEC line)

MISSISSIPPI RIVER AT BURLINGTON
* 9 AM STAGE: 15.0 FT.
* FLOOD STAGE: 15.0 FT.
* CRESTED 16.10 FT AT 6 PM APRIL 29TH.
* IS CURRENTLY FALLING BELOW THE FLOOD STAGE AND WILL CONTINUE TO FALL.
* THIS WILL BE THE LAST STATEMENT FOR THIS LOCATION FOR THIS EVENT.

$$

Interpretation (broad view - specific information in individual segments below): WFO Quad Cities IA IL issued a Flood Statement product on May 3, 2004, that canceled a Flood Warning event (the 9th of the year) for two locations on the Mississippi River.

Segment 1 (Mississippi River near Gladstone - IA zone 89 and IL zone 25 - from the UGC line): The minor flood (1) was caused by excessive rainfall, was not a record, with the flood beginning

on April 26 about 2000 UTC, crested on April 30 about 1100 UTC, and ended on May 3 about 1300 UTC (from the H-VTEC line).

Segment 2 (Mississippi River at Burlington - IA zone 99 and IL zone 34 - from the UGC line): The minor flood (1) was caused by excessive rainfall, was not a record, with the flood beginning on April 26th about 2000 UTC, crested on April 29th about 2300 UTC, and ended on May 3rd about 1535 UTC.

e. Combined Severe Thunderstorm Warning and Flash Flood Warning - Correction.

Example - Correction to combined warnings (using FFW identifier) - requires two P-VTEC lines and one H-VTEC line (in non-segmented product)

WGUS55 KTWC 1835 CCA
FFWTWC
AZC019-132000- (UGC line)
/O.COR.KTWC.FF.W.0035.020813T1[illegible]5Z-020813T2000Z/ (P-VTEC line 1)
/0.ER.00T0000Z.00T0000Z.00T0000Z.0/ (H-VTEC line)
/O.COR.KTWC.SV.W.0042.020813T1835Z-020813T1900Z/ (P-VTEC line 2)

BULLETIN - EAS ACTIVATION REQUESTED
COMBINED SEVERE THUNDERSTORM AND FLASH FLOOD WARNING...CORRECTED
NATIONAL WEATHER SERVICE TUCSON AZ
1135 AM MST TUE AUG 13 2002

...CORRECTED TO REMOVE SOUTHEAST PINAL COUNTY...

THE NATIONAL WEATHER SERVICE IN TUCSON HAS ISSUED A

* COMBINED SEVERE THUNDERSTORM AND FLASH FLOOD
  WARNING FOR...CENTRAL PIMA COUNTY IN ARIZONA

* SEVERE THUNDERSTORM WARNING UNTIL 12 NOON MST
  FLASH FLOOD WARNING UNTIL 100 PM MST.

* AT 1135 AM MST... NATIONAL WEATHER SERVICE DOPPLER
  RADAR INDICATED A SEVERE THUNDERSTORM WITH VERY HEAVY
  RAIN OVER CENTRAL PIMA COUNTY...OR ABOUT 10 MILES SOUTH
  OF ROBLES JUNCTION...MOVING NORTHWEST AT 10 MPH.

* THIS THUNDERSTORM WILL MOVE INTO REMOTE DESERT AREA 10
  MILES WEST OF ROBLES JUNCTION BY 12 NOON.

DOPPLER RADAR SHOWED A VERY STRONG THUNDERSTORM WITH

HEAVY RAIN AND WINDS IN EXCESS OF 60 MPH OVER HIGHWAY 286 ABOUT 10 MILES SOUTH OF ROBLES JUNCTION. BE PREPARED FOR DAMAGING WIND AND NEAR ZERO VISIBILITY DUE TO BLOWING DUST.

RAINFALL TOTALS IN EXCESS OF TWO INCHES ARE POSSIBLE IN THIS AREA. WASHES THAT MAY OVERFLOW WILL BE ALTAR WASH...FRESNAL WASH AND BOLA BLANCAS WASH. EXCESSIVE RUNOFF FROM THIS STORM WILL CAUSE FLASH FLOODING OF SMALL CREEKS AND STREAMS...COUNTRY ROADS...NORMALLY DRY WASHES AND ARROYOS...AS WELL AS FARMLAND ALONG THE BANKS OF CREEKS AND STREAMS.

NEVER ATTEMPT TO CROSS SWIFTLY FLOWING WATERS BY FOOT OR CROSS ROADWAYS COVERED BY WATER. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. MOVE TO HIGHER GROUND.

A COMBINED SEVERE THUNDERSTORM AND FLASH FLOOD WARNING MEANS THAT DAMAGING WIND...HAIL... AND FLOODING ARE IMMINENT OR OCCURRING.

LAT...LON 3196 11155 3182 11138 3193 11123 3207 11142

$$

Interpretation: WFO Tucson, AZ, issued a correction to a combined Severe Thunderstorm Warning and Flash Flood Warning product (using the FFW identifier) on August 13, 2002 at 1835 UTC to remove Southeast Penal Co (county 019 - from the UGC line). The 1st P-VTEC line provided the correction for the 35th Flash Flood Warning (FFW) that was valid from 1835 UTC until 2000 UTC on the 13th. The H-VTEC line shows that the flash flood was caused by excessive rainfall, with zeros (0) for the rest of the fields. The 2nd P-VTEC line provided the correction for the 42nd Severe Thunderstorm Warning (SVS) that was valid from 1835 UTC until 1900 UTC on the 13th.

D R A F T